Attorney Docket No.:

Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same

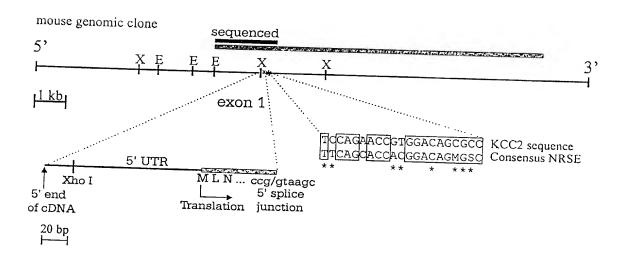
Applicant(s): Mount et al.

1242/26/2

Title. Purified and Isolated Potassium-Chloride Cotransporter
Nucleic Acids and Polypeptides and Therapeutic and
Screening Methods Using Same

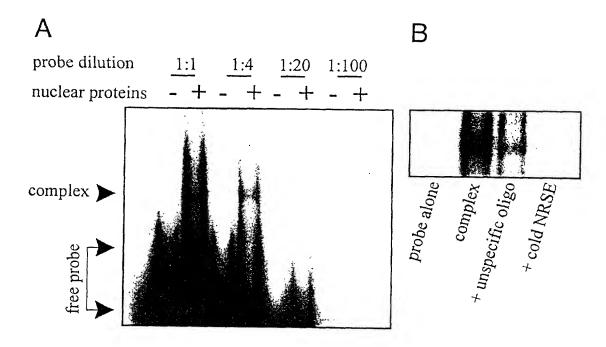
Applicant(s): Mount et al.
Attorney Docket No.: 1242/26/2

Figure 3



Title: Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same
Applicant(s): Mount et al.
Attorney Docket No.: 1242/26/2

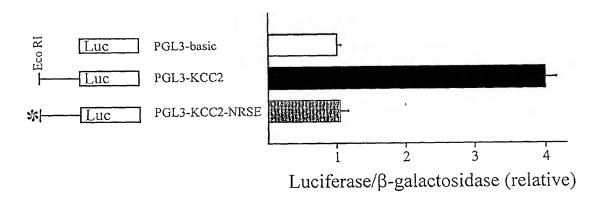
Figure 4



Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same (s): Mount et al. utie.

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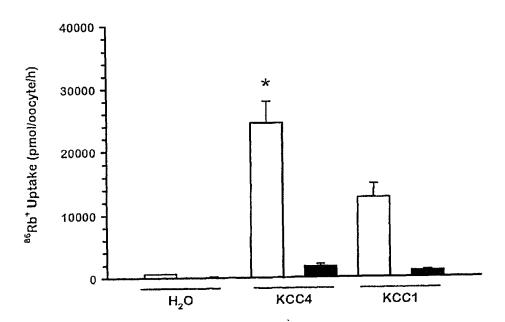
Figure 5



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Title: Purified and Isolated Potassium-Chloride Cotransporter
Nucleic Acids and Polypeptides and Therapeutic and
Screening Methods Using Same
Applicant(s): Mount et al.
Attorney Docket No.: 1242/26/2

Figure 6

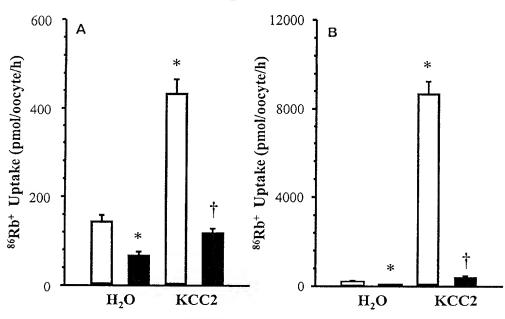


Title: Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same (s): Mount et al.

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Applicant(s): N
Attorney Docket No.:

Figure 7

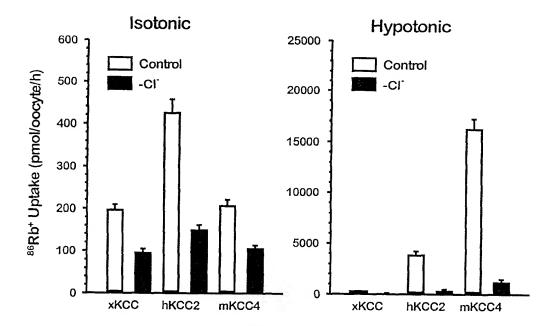


Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same Title:

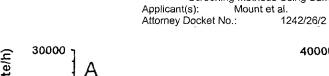
Applicant(s): M
Attorney Docket No.: Mount et al.

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Figure 8



Punfied and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same Title:



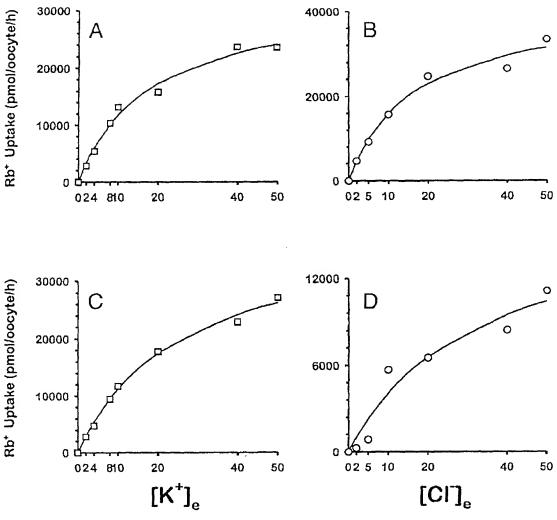
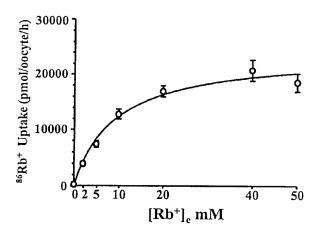
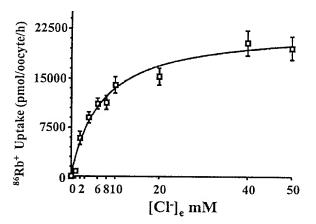


Figure 9

Title: Purified and Isolated Potassium-Chloride Cotransporter
Nucleic Acids and Polypeptides and Therapeutic and
Screening Methods Using Same
Applicant(s): Mount et al.
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Figure 10

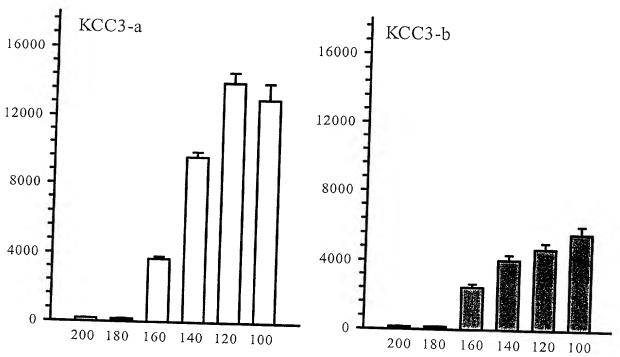




Title. Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same

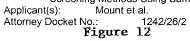
Applicant(s): N Attorney Docket No.: Mount et al. .: 1242/26/2

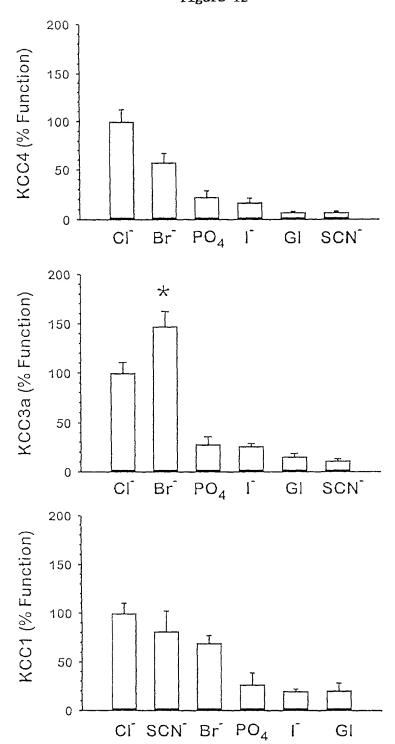




Extracellular Osmolarity (mOsm/Kg)

Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Nethods Using Same Litle.



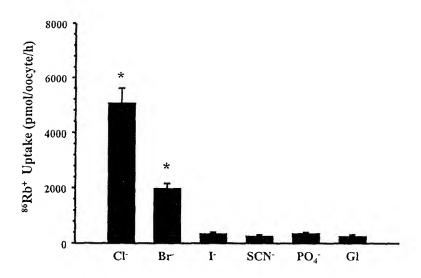


ngassuzs .chlsDl

Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same (s): Mount et al. Docket No.: 1242/26/2 Litle.

Applicant(s): M
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Figure 13

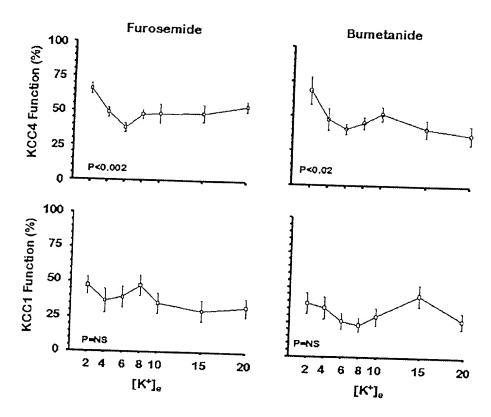


Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same

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Figure 14

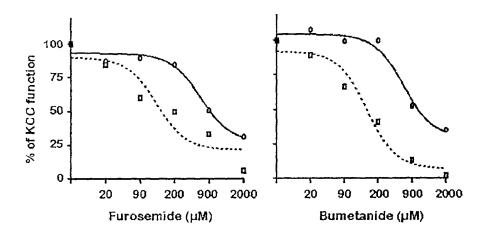


Puritied and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same mue.

Mount et al.

Applicant(s): N
Attorney Docket No.: 1242/26/2

Figure 15

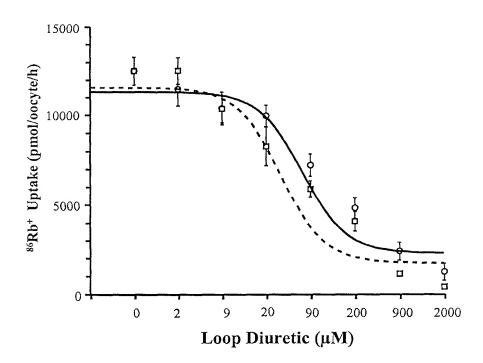


Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same

(s) Mount et al. Title:

Applicant(s) M Attorney Docket No.: 1242/26/2

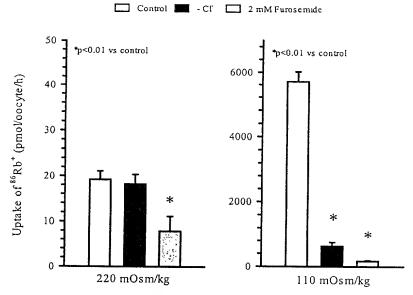
Figure 16



Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and

Screening Methods Using Same
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Attorney Docket No.: 1242/26/2

Figure 17



Extracellular Osmolarity

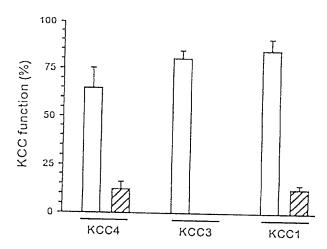
Title. Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same
(s): Mount et al.

Applicant(s): N
Attorney Docket No.:

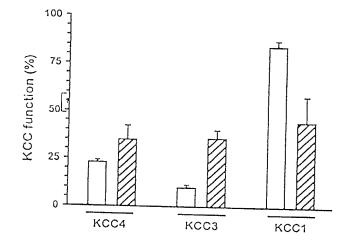
1242/26/2

Figure 18

A) DIDS (100 μM)



# B) DIOA (100 μM)



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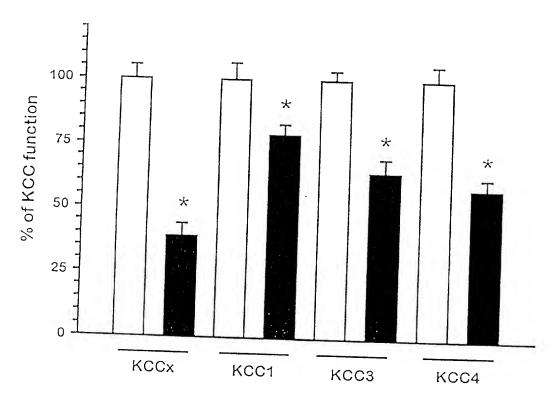
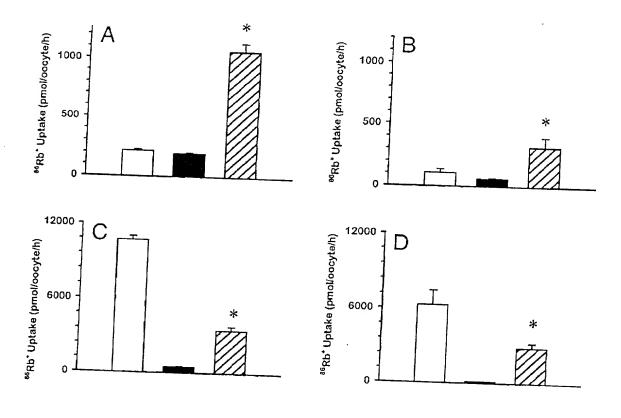
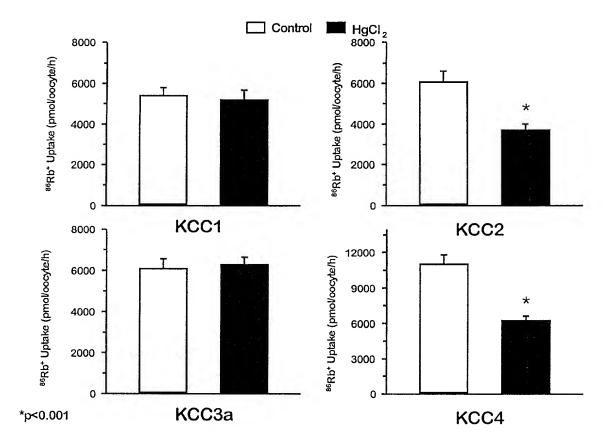


Figure 19

Title. Purified and Isolated Potassium-Chloride Cotransporter
Nucleic Acids and Polypeptides and Therapeutic and
Screening Methods Using Same
Applicant(s): Mount et al.
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Figure ZU



Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same
Applicant(s): Mount et al.
Attorney Docket No.: 1242/26/2
Figure 21

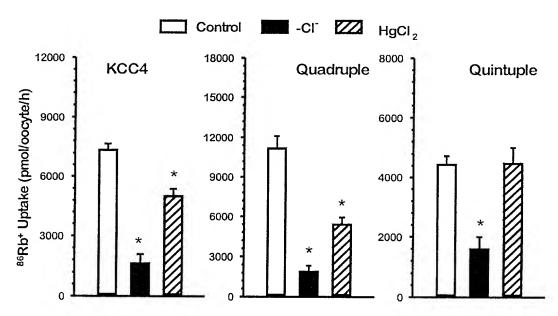


Title. Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same (s): Mount et al.

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Figure 22



\*p<0.01 vs control

Figure 23

Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and

Screening Methods Using Same

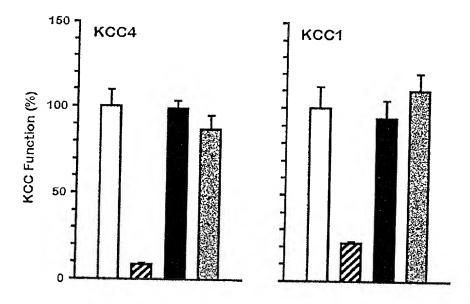
Applicant(s): Mount et al.

Attorney Docket No.: 1242/26/2

**Κρ+ nbtake (pmol/oocyte/hr)** 

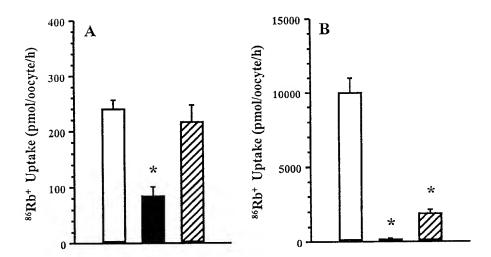
Title: Punfied and Isolated Potassium-Chloride Cotransporter
Nucleic Acids and Polypeptides and Therapeutic and
Screening Methods Using Same
Applicant(s): Mount et al.
Attorney Docket No.: 1242/26/2

Figure 24



Title: Purified and Isolated Potassium-Chloride Cotransporter
Nucleic Acids and Polypeptides and Therapeutic and
Screening Methods Using Same
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Figure 25

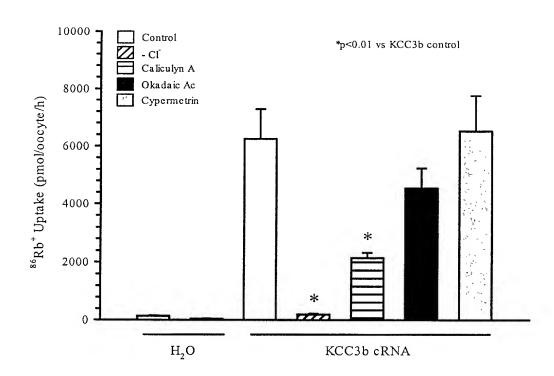


Title: Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same

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Figure 26



Title: Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and

Screening Methods Using Same Mount et al.

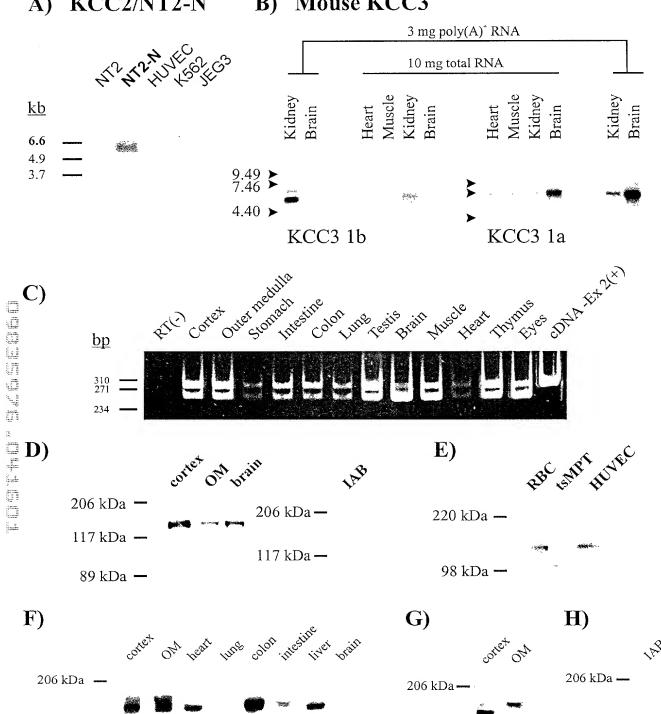
Attorney Docket No.:

1242/26/2

Figure 27

#### KCC2/NT2-N **Mouse KCC3 B**)

117 kDa —

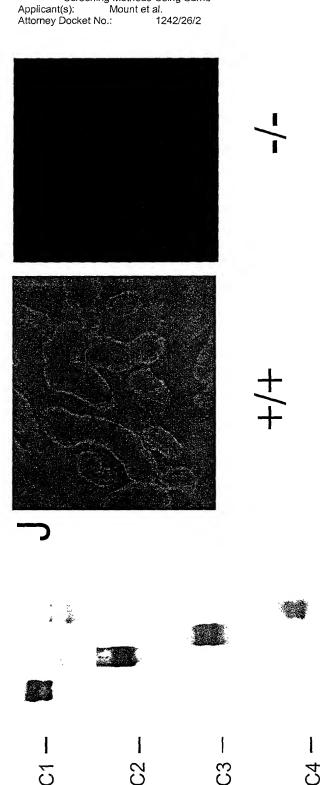


117 kDa-

117 kDa ---

Figure 27 (cont.)

Title: Purified and Isolated Potassium-Chloride Cotransporter
Nucleic Acids and Polypeptides and Therapeutic and
Screening Methods Using Same
Applicant(s): Mount et al.
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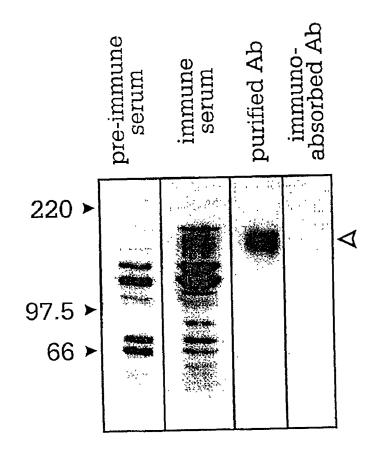


Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same (s): Mount et al.

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Figure 28



 $\beta$ -Actin

Choroid Plexus

Respectively

Choroid Plexus

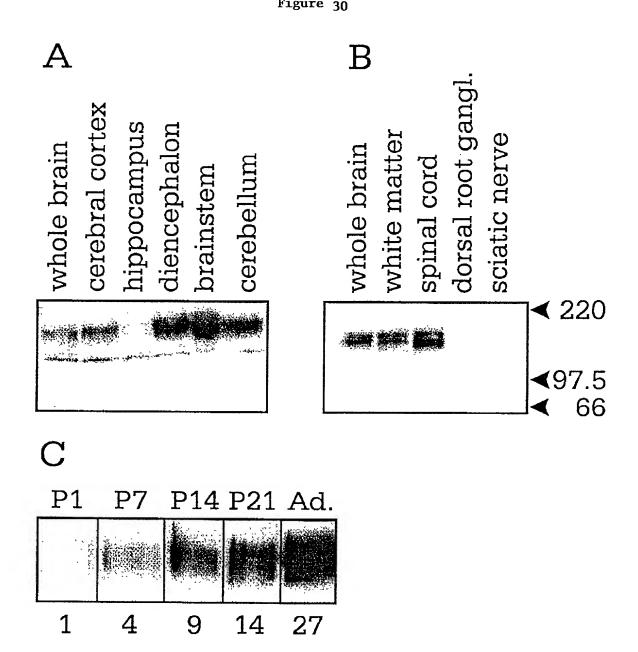
Title:

Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and

Figure 29

Title. Purified and Isolated Potassium-Chloride Cotransporter
Nucleic Acids and Polypeptides and Therapeutic and
Screening Methods Using Same
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Figure 30



Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same

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Attorney Docket No.: 1242/26/2 **Dorsal Columns** Lateroventral Columns E B **CNPase** F Both

Figure 31

Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same (s): Mount et al.

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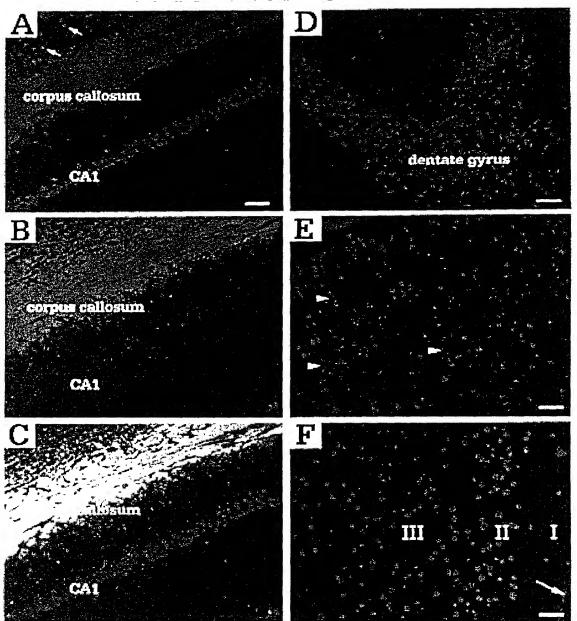


Figure 32

Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same

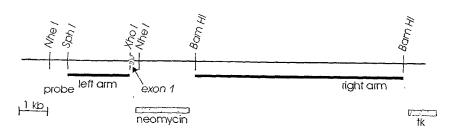
Applicant(s): Mount et al.

Attorney Docket No.:

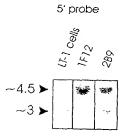
1242/26/2

Figure 33

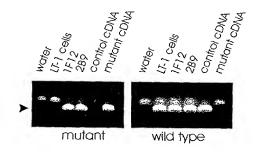
## A) Targeting strategy



#### B) Southern

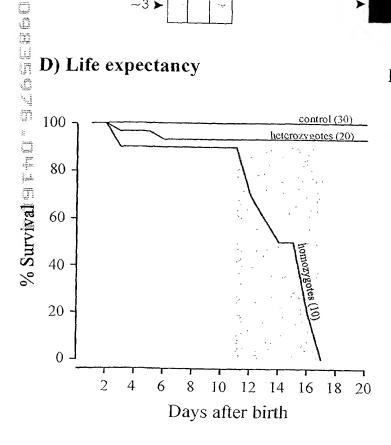


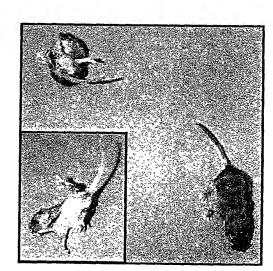
## C) PCR



## D) Life expectancy

## E) Seizure disorder



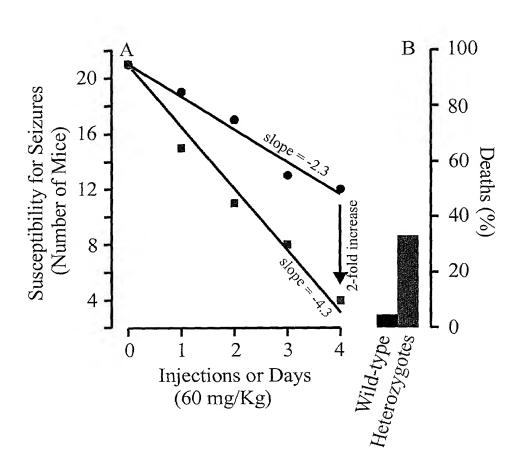


Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and utie. Screening Methods Using Same

Applicant(s): N Attorney Docket No.: Mount et al.

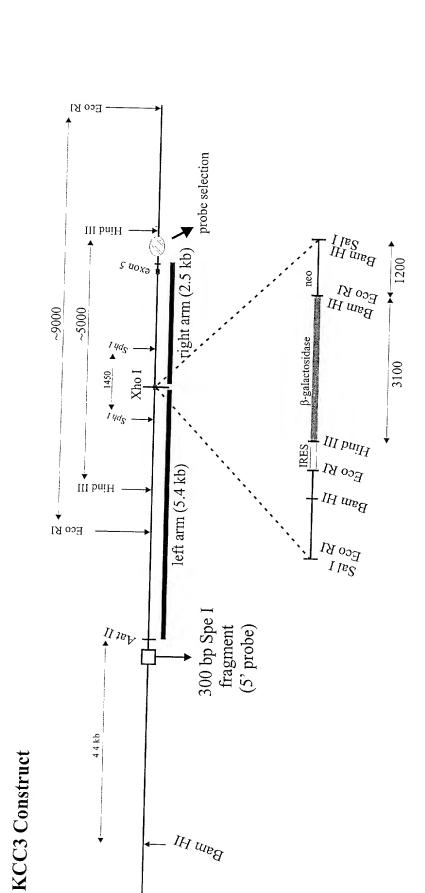
1242/26/2

Figure 34



Title: Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same
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Applicant(s): N Attorney Docket No.: 1242/26/2



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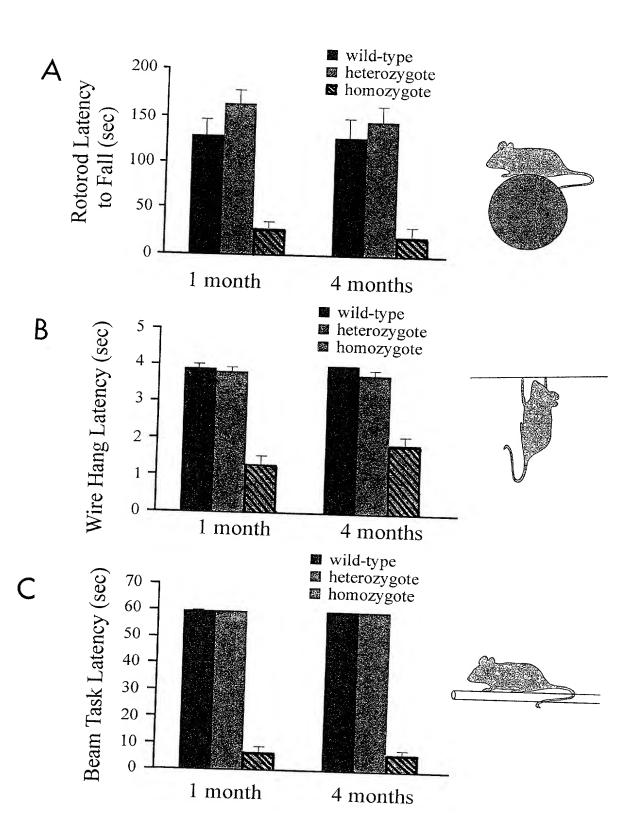
€ T Not I

Figure 35

Title: Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same

Applicant(s): Mount et al. Attorney Docket No.: 1242/26/2

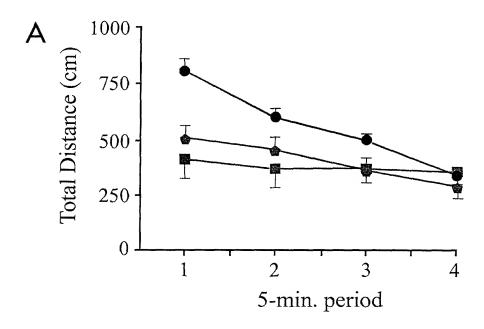
Figure 36

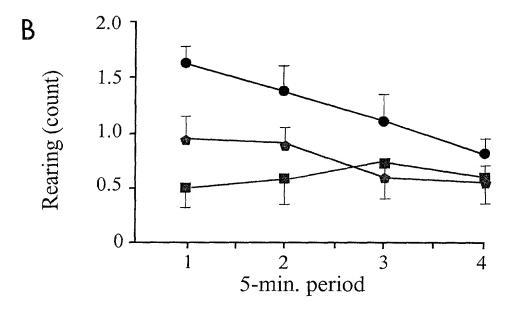


Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same (s): Mount et al. Docket No.: 1242/26/2 Title:

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Attorney Docket No.:

Figure 37



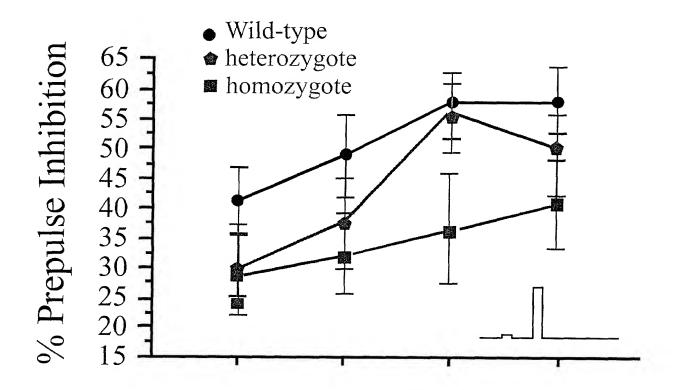


Title: Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same

Applicant(s): Attorney Docket No.:

Mount et al. 1242/26/2

Figure 38

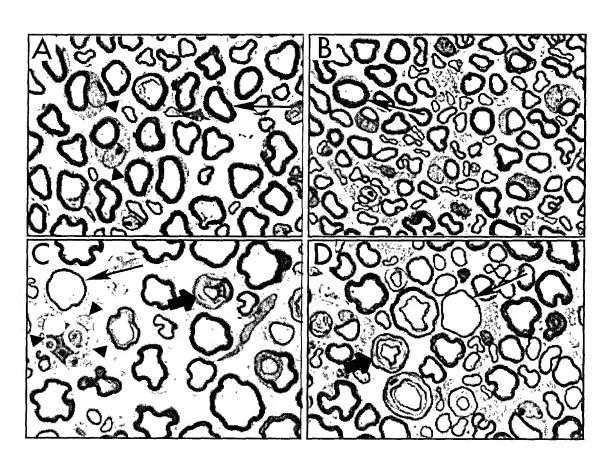


Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same t(s): Mount et al.

Docket No.: 1242/26/2 Title:

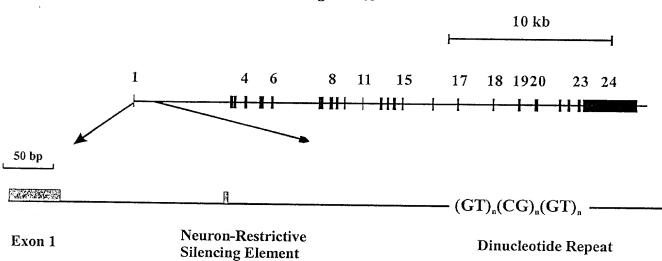
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Figure 39



Title: Purified and Isolated Potassium-Chloride Cotransporter Nucleic Acids and Polypeptides and Therapeutic and Screening Methods Using Same
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Figure 40



Title: Purified and Isolated Potassium-Chloride Cotransporter
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#### Sequence of the hKCC2 dinucleotide repeat in several individuals:

Sample 1:	
Allele A	$(GT)_{18} (GC)_7 (AT)_1 (GT)_4 (GC)_1 (GT)_{11} / Total = 84$

Allele B 
$$(GT)_{16} (GC)_5 (AT)_1 (GT)_5 (GC)_1 (GT)_9 / Total = 74$$

Sample 2:  
Allele A 
$$(GT)_{18} (GC)_4 (AT)_2 (GT)_4 (GC)_2 (GT)_{11} / Total = 82$$

Sample 3:  
Allele A 
$$(GT)_{16}(GC)_6(AT)_1(GT)_4(GC)_1(GT)_{11}$$
 / Total = 78  
Allele B  $(GT)_{14}(GC)_5(AT)_1(GT)_4(GC)_1(GT)_{11}$  / Total = 72

Sample 4: Allele A 
$$(GT)_{19} (GC)_6 (AT)_2 (GT)_4 (GC)_2 (GT)_{10} / Total = 86$$
Allele B  $(GT)_{17} (GC)_7 (AT)_2 (GT)_4 (GC)_2 (GT)_{10} / Total = 84$ 

Sample 5: Allele A 
$$(GT)_{17} (GC)_6 (AT)_2 (GT)_4 (GC)_1 (GT)_{10} / Total = 80$$
 Allele B  $(GT)_{16} (GC)_6 (AT)_2 (GT)_3 (GC)_2 (GT)_{10} / Total = 78$ 

Sample 6:  
Allele A 
$$(GT)_{15} (GC)_6 (AT)_1 (GT)_4 (GC)_1 (GT)_{11} / Total = 76$$
  
Allele B  $(GT)_{16} (GC)_5 (GT)_1 (AT)_1 (GT)_4 (GC)_1 (GT)_{11} / Total = 78$ 

Sample 7:  
Allele A 
$$(GT)_{16} (GC)_4 (GT)_1 (AT)_1 (GT)_5 (GC)_1 (GT)_{10} / Total = 76$$

Figure 41